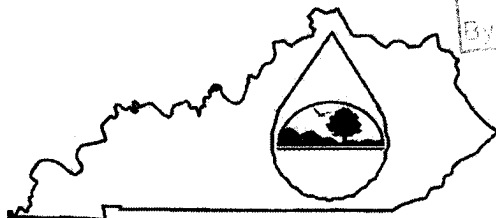


# KPDES FORM HQAA



## Kentucky Pollutant Discharge Elimination System (KPDES)

### High Quality Water Alternative Analysis

The Antidegradation Implementation Procedures outlined in 401 KAR 5:030, Section 1(3)(b)5 allows an applicant who does not accept the effluent limitations required by subparagraphs 2 and 3 of 5:030, Section 1(2)(b) to demonstrate to the satisfaction of the Environmental and Public Protection Cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. The approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. This demonstration shall also include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation.

#### I. Permit Information

Facility Name:	McCreary County Park	KPDES NO.:	
Address:	U.S. Highway 27	County:	McCreary
City, State, Zip Code:	Whitley City, KY 42653	Receiving Water Name:	Unnamed Eastern Tributary of the Barren Fork

#### II. Alternatives Analysis: For each alternative below, discuss what options were considered and state why these options were not considered feasible.

1. **Discharge to other treatment facilities.** Indicate which treatment works have been considered and provide the reasons why discharge to these works is not feasible.

The stormwater discharge from the Park site drains to the lowest area on the site within the eastern tributary. Alternative treatment of stormwater would include a mechanical pre-treatment, anti-vortex station, a pump station to pump to a municipal wastewater treatment plant and approximately 1.25 miles of force main. The approximate costs for this alternate method of treatment are as follows

A. Pre-treatment station	\$ 75,000.00
B. Pump Station	\$125,000.00
C. 1.25 miles Force main	\$118,800.00
<b>Total estimated costs</b>	<b>\$320,000.00+/-</b>

Annual maintenance costs for the pre-treatment station and pump station would be approximately \$15,000 and disposal/tipping fees would cost approximately \$5,000 annually.

The McCreary County Park Board does not have continual financial resources for maintenance of the disposal system and initial capital construction grants do not include the conveyance system costs.

2. **Use of other discharge locations.** Indicate what other discharge locations have been evaluated and the reasons why these locations are not feasible.

There are other tributaries in the area in which the stormwater could be pumped, although the tributaries in this watershed all drain to the Barren Fork which is a High Quality water of the Commonwealth.

## II. Alternatives Analysis - continued

3. **Water reuse or recycle.** Provide information about opportunities for water reuse or recycle at this facility. If water reuse or recycle is not a feasible alternative at this facility, please indicate the reasons why.

Stormwater discharge or the Park's eastern tributary could be recycled with significant environmental impairment and or construction of a "recycling" system. An impoundment or lake would have to be constructed to capture the stormwater discharge prior to recycling and a pump station installed, with an access road to the pump station. The lake would potentially destroy habitats that have been preserved. A constructed, underground storage system would require approximately 30 million gallons of underground storage to accommodate a peak discharge. This would equate to approximately 30,000, 1000 gallon tanks, costing approximately \$45,000,000 to install, approximately \$100,000 for a pump station and approximately \$50,000 for a spray irrigation system on-site to distribute the collected stormwater discharge.

4. **Alternative process or treatment options.** Indicate what process or treatment options have been evaluated and provide the reasons they were not considered feasible.

Other options for treatment to stormwater discharge to the site include mechanical methods of treatment and conveyance. The additional volume of water that is being collected by the municipal water treatment system, either for potable use or by a waste water treatment system may require upgrades to the municipal system. In addition to the upgrades a conveyance system from the Park site including holding tanks, pump stations and force mains at an approximate cost of \$350,000 will be required.

## II. Alternatives Analysis - continued

5. **On-site or subsurface disposal options.** Discuss the potential for on-site or subsurface disposal. If these options are not feasible, then please indicate the reasons why.

On-site disposal of stormwater discharges could occur with a spray irrigation system or infiltration/leach fields. Each system will require a mechanical conveyance system to pump the stormwater to areas in the Park in which it could be distributed. The following are approximate costs for an on-site distribution system.

A. Pump Station	\$125,000.00
B. Holding Tanks	\$ 50,000.00
C. Irrigation spray	\$ 75,000.00
D. Pre-treatment Station	\$ 75,000.00

In addition to these costs will be permitting costs and annual maintenance costs for the system.

The McCreary County Park Board has no funded allocations with grants to pay for these capital expenditures.

6. **Evaluation of any other alternatives to lowering water quality.** Describe any other alternatives that were evaluated and provide the reasons why these alternatives were not feasible.

Other water quality treatment systems were considered such as on-site treatment and conveyance to a municipal system, although funding grants did not allow for these expenditures. The County has no other means to pay for alternative treatment methods. Should the system proposed not be allowed, the project cannot be completed and grant funds would most likely have to be reimbursed. The County has no means to reimburse the funds. Should the Park not be developed there will be socio-economic impacts without a recreational Facility for the County. The ball fields on the Park are replacing ball fields displaced by the McCreary County Center. This expansion of the McCreary County KCTCS Center has already started and no ball fields are available to the County without new ones at the new Park.

### III. Socioeconomic Demonstration

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.

The new McCreary County Park will have many positive impacts to the community from an environmental and public health standpoint.

- A. Provide a public outdoor recreational facility for active recreation that does not currently exist in McCreary County.
- B. Reclaim an existing site that has been previously timber harvested without sensitivity to the environment.
- C. Provide an area for play that will meet the objectives of public health in the No Child Inside Program.
- D. Provide an area for physical recreation such as hiking and playing that will help mitigate childhood obesity which is one of the highest in the nation.
- E. Organized maintenance at the Park will mitigate erosion of the site, litter control and illegal dumping that has been occurring on the site prior to the Park's development.

2. Describe this facility's effect on the employment of the area

The McCreary County Park will have a positive impact on employment in the area at a 10.3% unemployment rate, one of the highest county rates in Kentucky, any new development will not only provide jobs, but will enhance the quality of life for persons considering a move to the area. The Park will create new jobs through the need of operations and maintenance and youth and senior program directors. Each one of these primary jobs will create up to 5 additional secondary jobs.

3. Describe how this facility will increase or avoid the decrease of area employment.

The creation of the McCreary County park will not only create up to 10 additional jobs, but will also create a better community environment that will enhance the ability to attract new employers and employees to the area. A socio-economic study performed in 2002 associated with the Federal Prison indicated that a community park was needed to attract the required workforce for the prison. The declining employment rate of 2.1% annually can be minimized with increased quality of life opportunities offered to the potential workforce.

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

As previously stated, specific studies for McCreary County reveal that active recreational opportunities will increase employment in the area. Benefits of a local Park include

- A. Increased revenues to the County during regional ball tournaments planned for the Park from

out-of-county visitors.

- B. Increased employment opportunities will increase new residents to the area and potentially higher property values, all resulting in increased tax revenues.
- C. The closest active recreation park is in Somerset, approximately 30 miles from McCreary County. A recreational facility closer to the residents will save travel times and subsequent travel costs for its residents. This also relates to loss of work time which equates to loss of wages.

5. Describe any other economic or social benefits to the community.

Providing enhanced opportunities for outdoor recreation will minimize "Environmental Deficit Disorder". A growing social phenomena due to lack of outdoor recreation. Lack of outdoor opportunities also directly relates to the growing obesity trends in children and adults.

**III. Socioeconomic Demonstration - continued**

	<u>Yes</u>	<u>No</u>
6. Will this project be likely to change median household income in the county?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will this project likely change the market value of taxable property in the county?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will this project increase or decrease revenues in the county? increase	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will any public buildings be affected by this system? A new Senior Citizens Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>

10. How many households will be *economically* or *socially* impacted by this project? 7,537

11. How will those households be *economically* or *socially* impacted? (For example, through creation of jobs, educational opportunities, or other social or economic benefits.)

The most current census data indicates there are 7,537 households in McCreary County, KY. The new county park complex will make McCreary County a more attractive place to live as well as provide for quality recreation and social activities for the entire population.

The above enhancements will result in the ability of the County to better compete for new businesses to locate in the area as well as provide enhanced recreational activities that will improve the overall health of the residents of the county.

Development of the Park will also provide the opportunity for organized ball leagues for children and adults and will provide additional recreational areas for local schools.

	<u>Yes</u>	<u>No</u>
12. Does this project replace any other methods of sewage treatment to existing facilities? (If so describe how)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed sanitary sewer system for the Park Facilities will utilized the existing system that is located adjacent to the Park. The main line extension from the Park may provide opportunities for future connections of users that currently are using straight pipes or leach fields

	<u>Yes</u>	<u>No</u>
13. Does this project treat any existing sources of pollution more effectively? (If so describe how.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Park development will clean-up the existing site that have at times been used as a dump site and degraded slopes will be stabilized and seeded that will filter and minimize stormwater discharge.

### III. Socioeconomic Demonstration - continued

14. Does this project eliminate any other sources of discharge or pollutants?  
(If so describe how.)
- |  | <u>Yes</u>                          | <u>No</u>                |
|--|-------------------------------------|--------------------------|
|  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Offsite stormwater discharge, approximately 7 acres, will be distributed through the newly created drainage system on the eastern tributary. This offsite discharge will also be filtered through the natural filtration system being created, which currently does not exist.

15. How will the increase in production levels positively affect the socioeconomic condition of the area?

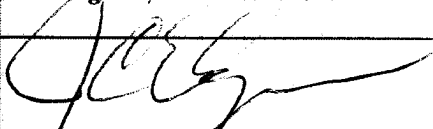
With an increase in employment, either directly or indirectly, as a result of the Park's development there will be more production of goods or services in the community that will lead to increased public and private revenues. With increased revenues to the County, the County can offer more services and benefits.

16. How will the increase in operational efficiency positively affect the socioeconomic condition of the area?

With the development of the McCreary County Park, several socio-economic benefits will become available.

- A. Increased employment opportunities
- B. Increased revenues to the County
- C. Increased recreation opportunities that enhance the health and welfare of the residents of McCreary County.

**IV. Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	J.C. Egnew, Park Board Chair	Telephone No.:	(606)376-5021
Signature:		Date:	1/14/2009

**Kentucky Pollutant Discharge Elimination System (KPDES)**  
**Instructions**  
**KPDES Permit Application Supplemental Information**

**SECTION I – PERMITTEE INFORMATION**

<b>Facility Name:</b>	Provide the name of the facility
<b>Mailing Address, City, State, and Zip Code:</b>	Provide the mailing address
<b>KPDES No.:</b>	Provide the KPDES permit number for the facility
<b>County:</b>	Indicate the county in which the facility is located
<b>Receiving Water Name:</b>	Indicate the water body into which the facility discharges or plans to discharge.

**SECTION II – Alternatives Analysis**

For each item, provide a synopsis of the evaluations that were performed. A successful demonstration will provide justifications as to why these alternatives were not consider viable.

Include appropriate supporting documentation.

**SECTION III – Socioeconomic Demonstration**

Answer yes or no as appropriate. Where indicated, provide a synopsis of the positive economic impacts that will result from this project. A successful demonstration will show why the lowering of water quality is necessary to accommodate important economic or social development in the area.

Include appropriate supporting documentation.

**SECTION IV - CERTIFICATION**

<b>Name and Title:</b>	Indicate the name and title of the person signing the form.
<b>Telephone No.:</b>	Provide the telephone number of the person signing the form.
<b>Date:</b>	Indicate the date that the form was signed.

This form is part of the permit application and must be signed as follows:

**Corporation:** by a principal executive officer of at least the level of vice president  
**Partnership or sole proprietorship:** by a general partner or the proprietor respecti